

CLAIMS

- 1 1. A loudspeaker system, comprising:
2 a first loudspeaker array,
3 said first loudspeaker array comprising an enclosure
4 having a width and a height and at least six acoustic drivers
5 having radiating surfaces,
6 each of said acoustic drivers having a diameter less than
7 three inches,
8 wherein said at least six drivers are positioned in said
9 enclosure in a first substantially straight line,
10 substantially regularly spaced so that the edges of said
11 radiating surfaces are less than two inches apart,
12 wherein said first array is constructed and arranged to
13 radiate sound in a predetermined frequency range.
2. A loudspeaker system in accordance with claim 1, wherein
said predetermined frequency range is at least six octaves.
3. A loudspeaker system in accordance with claim 1 further
comprising a second loudspeaker array having an enclosure and
a plurality of acoustic drivers having radiating surfaces,
each of said drivers having a diameter of less than
three inches,
said drivers positioned in said enclosure in a second
substantially straight line, regularly spaced less than one
inch apart,
wherein said second loudspeaker device is constructed and
arranged to be attached to said first loudspeaker device in a
manner that extends said first substantially straight line so
that the height of said loudspeaker system is increased and so
that the width of said loudspeaker system remains constant.
4. A loudspeaker system in accordance with claim 3, wherein
the ratio of the height of said loudspeaker system to said
width is greater than twenty.

1 5. A loudspeaker system in accordance with claim 3,
2 further comprising an attachment device for attaching
3 said first loudspeaker array to said second loudspeaker array.

1 6. A loudspeaker system in accordance with claim 3,
2 further comprising circuitry which provides essentially
3 the same audio signal to all of said acoustical drivers in
4 both of said loudspeaker arrays at all frequencies.

1 7. A loudspeaker system in accordance with claim 3, wherein
2 said first loudspeaker array is portable.

1 8. A loudspeaker system in accordance with claim 1,
2 further comprising an electrical circuit which provides
3 essentially the same audio signal to all of said acoustical
4 drivers at all frequencies.

1 9. A loudspeaker system in accordance with claim 1, wherein
2 the ratio of said height to said width is greater than eleven.

1 10. A loudspeaker system in accordance with claim 1 wherein
2 said loudspeaker system radiates sound energy and wherein said
3 loudspeaker system is constructed and arranged to transduce to
4 acoustical energy substantially at least seven watts of
5 electrical energy per square inch of radiating surface.

1 ~~11.~~ A loudspeaker system, comprising:
2 a first portable array module comprising a portable
3 enclosure and at least six acoustic drivers positioned in said
4 enclosure in a substantially straight line;
5 a second portable array comprising a second portable
6 enclosure and a plurality of acoustic drivers positioned in a
7 substantially straight line; and

8 an attachment system for attaching said first portable
9 array to said second portable array in a manner so as to
10 extend said substantially straight line.

1 ~~12.~~ A loudspeaker array module, comprising:
2 ✓a portable enclosure having an attachment system for
3 attaching said module to a second module; and
4 ✓at least six acoustic drivers,
5 ✓each of said acoustic drivers having radiating surface,
6 each of said acoustic drivers having a diameter less than
7 three inches,
8 ✓said at least six acoustic drivers positioned in said
9 enclosure in a substantially straight line, regularly spaced
10 so that the edges of said radiating surfaces are less than one
11 inch apart;
12 ✓said loudspeaker array module constructed and arranged to
13 radiate sound over essentially the full range of the audible
14 frequency spectrum.

1 ~~13.~~ A method for improving the number of electrical watts
2 transduced per unit radiating area of a line array loudspeaker
3 array comprising:
4 mounting in a substantially straight line a plurality of
5 acoustic drivers, each of said acoustic drivers having a
6 diameter of less than three inches and each of said acoustic
7 drivers having a radiating surface having an edge; and
8 placing said acoustic drivers in said line so that the
9 edges of radiating surfaces of adjacent acoustic drivers are
10 separated by no greater than one inch.

1 ~~14.~~ A loudspeaker system for a live source of sound
2 comprising:
3 a line array loudspeaker comprising a line array
4 plurality of acoustic drivers,
5 each of said acoustic drivers having a diameter less than
6 three inches,

7 said plurality of acoustic drivers positioned in an
8 enclosure in a substantially straight line, regularly spaced
9 less than one inch apart,

10 said line array being constructed and arranged to be
11 placed in the near vicinity of said live source of sound,
12 facing an audience.

1 15. A loudspeaker system in accordance with claim 14, wherein
2 said live source of sound is from the group consisting of a
3 vocalist musical performer and presenting entity.

1 16. A loudspeaker system in accordance with claim 15,
2 wherein said musical performing entity comprises a
3 plurality of performers,

4 said loudspeaker system comprising a plurality of line
5 arrays,

6 each of said line arrays having a plurality of acoustic
7 drivers,

8 each of said acoustic drivers having a diameter less than
9 three inches,

10 said plurality of acoustic drivers positioned in said
11 enclosure in a substantially straight line, regularly spaced
12 less than one inch apart,

13 each of said line arrays being constructed and arranged
14 to be placed in the near vicinity of one of said plurality of
15 performers.

1 17. A loudspeaker system in accordance with claim 14 wherein
2 said live source is an orator.

1 18. A loudspeaker system in accordance with claim 14, wherein
2 said line array is constructed and arranged to be placed so
3 that said live source of sound is between said line array and
4 said audience.

1 19. A loudspeaker system for a public facility having a
2 listening area, said listening area having a floor and an
3 intended listening height range above said floor, said
4 loudspeaker system comprising:

5 a line loudspeaker array having a top and a bottom
6 comprising a plurality of acoustical drivers array in a
7 substantially straight line connecting said top and said
8 bottom,

9 said top and said bottom defining planes perpendicular to
10 said line,

11 wherein said array is dimensioned and positioned such
12 that said intended listening height lies between said plane
13 defined by said top and said plane defined by said bottom and
14 such that said bottom is substantially in the vicinity of said
15 floor.

16 20. A loudspeaker system in accordance with claim 19, wherein
17 said floor is raked and wherein said loudspeaker array is
18 oriented such that said line is tilted from the vertical.